(54) Title of Utility Model: Meal Ticket Vending Machine

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(72) Creator: Takanobu AOKI
                                Glory Kogyo Co. Ltd., 35 Shimoteno, Himeji-shi

(72) Creator: Toshihiko IWAZAWA
                                Glory Kogyo Co. Ltd., 35 Shimoteno, Himeji-shi

(71) Applicant: Glory Kogyo Co. Ltd., 35 Shimoteno, Himeji-shi

(74) Agent: Ura KABASAWA, Patent Attorney (and 3 others)

Specification (2)

1. Title of the Utility Model

Meal Ticket Vending Machine

2. Claim

A meal ticket vending machine, wherein meal tickets are sold for menu items selected within the price range of the inserted money by pressing menu selection buttons for the desired menu items, the various selection buttons being installed for predetermined menu items, and wherein the menu ticket vending machine comprises an actual account memory for storing the menu item names and prices for each account number corresponding to the installed selection buttons, a virtual account memory for storing the menu item names and prices for each account number not being used and not corresponding to the selection buttons in the actual account memory, a numerical value input means able to input numerical value data for the account numbers, an exchange account memory for storing account numbers entered using the numerical value input means to be exchanged between the actual account memory and the virtual account memory, and a control means for changing the menu item and price corresponding to the indicated account number in the actual account memory and the menu item and price corresponding to the indicated account number in the virtual account memory based on the memory content of the exchange account memory.

3. Detailed Description of the Utility Model

(Purpose of the Utility Model)

(Industrial Field of Application)

The present utility model relates to a meal ticket vending machine for selling meal tickets for menu items selected within the price range of the inserted money.

(Prior Art)

In a meal ticket vending machine, meal tickets are sold for menu items selected within the price range of the inserted money (including credit cards, etc.) by pressing menu selection buttons for the desired menu items. Here, the various selection buttons are installed for predetermined menu items.

In a meal ticket vending machine, the menu item names and prices corresponding to the various selection buttons are stored in memory.

/3

When the menu items are changed due to a change in season etc., the menu items stored in the memory have to be changed. When a menu item is changed, a code has to be inputted using a ten-key pad. The menu item name and price for each selection button to be changed has to be entered one character at a time to create a sequence of characters or numbers.

(Problem Solved by the Utility Model)

When menu items are to be changed in a meal ticket vending machine of the prior art, the menu item name and price for each selection button to be changed has to be entered one character at a time to create a sequence of characters or numbers. This is difficult and time-consuming. It is difficult to erase and re-enter the data to be stored for the changed menu item, to change menu items from scratch, and to update menu items from scratch.

/4

In light of this situation, the purpose of the present utility model is to provide a meal ticket vending machine in which menu items are easy to change and in which menu items that have been changed can be stored.

(Constitution of the Utility Model)

3

(Means of Solving the Problem)

The present utility model is a meal ticket vending machine, wherein meal tickets are sold for menu items selected within the price range of the inserted money by pressing menu selection buttons for the desired menu items, the various selection buttons being installed for predetermined menu items, and wherein the menu ticket vending machine comprises an actual account memory 5 for storing the menu item names and prices for each account number corresponding to the installed selection buttons, a virtual account memory 6 for storing the menu item names and prices for each account number not being used and not corresponding to the selection buttons in the actual account memory 5, a numerical value input means 12 able to input numerical value data for the account numbers, an exchange account memory 7 for storing account numbers entered using the numerical value input means 12 to be exchanged between the actual account memory 5 and the virtual account memory 6,

and a control means 1 for changing the menu item and price corresponding to the indicated account number in the actual account memory 5 and the menu item and price corresponding to the indicated account number in the virtual account memory based on the memory content of the exchange account memory 7.

(Operation)

In the meal ticket vending machine of the present utility model, menu item and price data is stored for each account number in the actual account memory and the virtual account memory. Once the account number data to be exchanged between the actual account memory and the virtual account memory has been entered into the exchange account memory, any indicated account number data in the actual account memory can be exchanged for any indicated account number data in the virtual account memory.

(Working Example)

4

The following is an explanation of the configuration of a working example of the present utility model with reference to the drawings.

In FIG 1, 1 is the control unit for controlling the entire meal ticket vending machine. This control unit 1 is connected to the vending control unit 2, the memory unit 3 and the ticket issuing unit 4.

The vending control unit 2 controls the vending of meal tickets for menu items that have been selected within the price range of the inserted money (including credit cards, etc.). For example, data for the menu item corresponding to the pressed selection button among thirty available selection buttons is called up from the memory unit 3, and a meal ticket for the menu item is issued by the ticket issuing unit 4.

As shown in FIG 2, the memory unit 3 has an actual account memory 5 for storing the menu items and prices for account numbers 1 through 30 corresponding to the thirty selection buttons used to issue tickets, and a virtual account memory 6 for storing the menu items and prices for account numbers 41 through 50 not used to issue tickets. The menu items and prices for the account numbers stored in memory 5 and memory 6 can be changed. As shown in FIG 3, the memory unit 3 also has an exchange account memory 7. This exchange account memory 7 has a buffer memory BUF for storing memory items and prices, and memory A and memory B for storing the various account numbers.

The ticket issuing unit 4 takes the menu item and price data for the account number selected from the actual account memory 5 in the memory unit 3 based on the vending control unit 2, prints the data on a thermal paper roll using a thermal printer, and cuts the paper to issue a meal ticket.

The control unit 1 is connected to a display unit 8, keys 9, 10, 11, and a numerical value data input unit 12.

The display unit 8 displays the contents of the memory unit 3 using a means such as a LED or liquid crystals.

5

The account detail display key 9 is used to display the details of the account numbers in the actual account memory 5 in the memory unit 3 on the display unit 8 in numerical order.

The account data changing key 10 is used to switch account data in the actual account memory 5 and the virtual account memory 6 in the memory unit 3.

The equal key 11 is used to confirm an exchange between the actual account memory 5 and the virtual account memory 6. Account detail displays 1-9 can be used to scroll through the account numbers displayed on the display unit 8.

The numerical value data input unit 12 is a numerical value input means such as a ten-key pad used to enter numerical value data such as account numbers.

/8

The control unit 1, the memory unit 3, the display unit 8, the keys 9, 10, 11, and the numerical value input unit 12 are incorporated into a control panel used by management.

The following is an explanation of the operations performed by this working example.

In the ticket issuing operation performed by the meal ticket vending machine, money in the form of paper money, coins or a credit card is inserted into the meal ticket vending machine. When a selection button for a menu item within the price range of the inserted money has been pressed, the data for the account number 2 in the memory unit 3 corresponding to the selection button (udon ... ¥450) is called up, the data for this account number 2 (udon ... ¥450) is printed by the ticket issuing unit 4, and a ticket is issued. If the amount of money inserted is greater than the price of the selected menu item, change is dispensed.

The menu item switching operation will now be explained with reference to the flowchart in FIG 4.

/9

6

In this example, cold soba in account number 4 of the actual account memory 5 and donburi in account number 41 of the virtual account memory 6 are to be exchanged. The manager presses the account data change key 10 to indicate an account change (Step 1). When account number 41 has been entered using the numerical value data input unit 12 (Step 2), account number 41 is stored in memory A of the exchange account memory 7 (Step 3). (At this time, account number 41 is displayed on the display unit 8.) The device determines whether the entered account number 41 is an account number in the virtual account memory 6 (Step 4). If an entry error has occurred or an account number in the actual account memory 5 has been entered, the process returns to Step 2 and the device waits for an account number to be entered.

When it has been determined in Step 4 that the entered account number 41 is an account number in the virtual account memory 6, account number 4 in the actual account memory 5 is entered (Step 5). At this time, account number 4 is stored in memory B of the exchange account memory 7 (Step 6). (Account number 4 is simultaneously displayed on the display unit 8.) The device determines whether the entered account number 4 is an account number in the actual account memory 5 (Step 7). If an entry error has occurred or an account number in the virtual account memory 6 has been entered, the process returns to Step 5 and the device waits for an account number to be entered.

/10

After the device has determined that the account number 4 entered in Step 7 is an account number in the actual account memory 5, the manager confirms the switching of account numbers 4 and 41 displayed on the display unit 8 by pressing the equal key 11 (Step 8). The data for account number 4 in the actual account memory 5 (cold soba ... ¥350) is moved to the buffer memory BUF (Step 9), the data for account number 41 in the virtual account memory 6 (donburi ... ¥650) is moved to account number 4 in the actual account memory 5 (Step 10), and the data in the buffer memory BUF (cold soba ... ¥350) is moved to account number 41 in the virtual account memory 6 (Step 11). The new data stored in account number 4 of the actual account memory 5 (donburi ... ¥650) is then confirmed by having the ticket issuing unit 4 print a meal ticket (Step 12). The process then returns to Step 1.

/11

7

After the data for the indicated account number in the actual account memory 5 has been moved to the buffer memory 5, the data for the indicated account number in the virtual account memory 6 is moved to the buffer memory BUF. The switched data is not erased, but moved to the virtual account memory 6. As a result, it can be reused when the data is changed again.

The manager can press the account detail display key 9 to confirm the data in the actual account memory 5 and the virtual account memory 6 (Step 13). The data in account number 1 is called up and displayed on the display unit (Steps 14, 15). After confirming display of this account number, the manager can use the equal key 11 to scroll down to the other account numbers in numerical order (Step 16). The data for the account number equal to the account number displayed on the display unit 8 plus one is called up (Step 17). The data is displayed in Step 18, and the process returns to Step 15. In Step 18, the device determines whether the account number is number 51. If not, the process returns to Step 15. If the account number is number 15, the process returns to Step 14 and the display begins again with account number 1. The account display mode ends when the manager stops the operation.

/12

In this working example, the account number in the actual account memory 5 is entered after the account number in the virtual account memory 6 during the account change operation. However, the account number in the virtual account memory 6 can be entered after the account number in the actual account memory 5 in another working example of the present utility model.

In this working example, the account number indicated in the actual account memory 5 is moved to the buffer memory BUF. However, the account number indicated in the virtual account memory 6 can be moved to the buffer memory BUF in another working example of the present utility model.

In this working example, the account numbers in the actual account memory 5 are numbered 1-30, and the account numbers in the virtual account memory 6 are numbered 41-50. However, the actual account memory 50 can have any number of accounts corresponding to the number of selection buttons, and the virtual account memory 6 can have any number of accounts that are needed for switching purposes.

8

(Effect of the Utility Model)

/13

In the meal ticket vending machine of the present utility model, menu item and price data is stored for each account number in the actual account memory and the virtual account memory. Once the account number data to be exchanged between the actual account memory and the virtual account memory has been entered into the exchange account memory, any indicated account number data in the actual account memory can be exchanged for any indicated account number data in the virtual account memory. Changes can be made by simply indicating the account numbers, and data for account numbers that have been changed is not erased but stored in the virtual account memory. As a result, it can be reused when the data is changed again.

4. Brief Explanation of the Drawings

FIG 1 is a configurational diagram of the meal ticket vending machine in a working example of the present utility model. FIG 2 is a memory map of the actual account memory and virtual account memory. FIG 3 is a memory map of the exchange account memory. FIG 4 is a flowchart of the menu change action.

1 ... Control Unit or Control Means, 5 ... Actual Account Memory, 6 ... Virtual Account Memory, 7 ... Exchange Account Memory, 12 ... Numerical Value Input Unit or Numerical Value Input Means

FIG 1
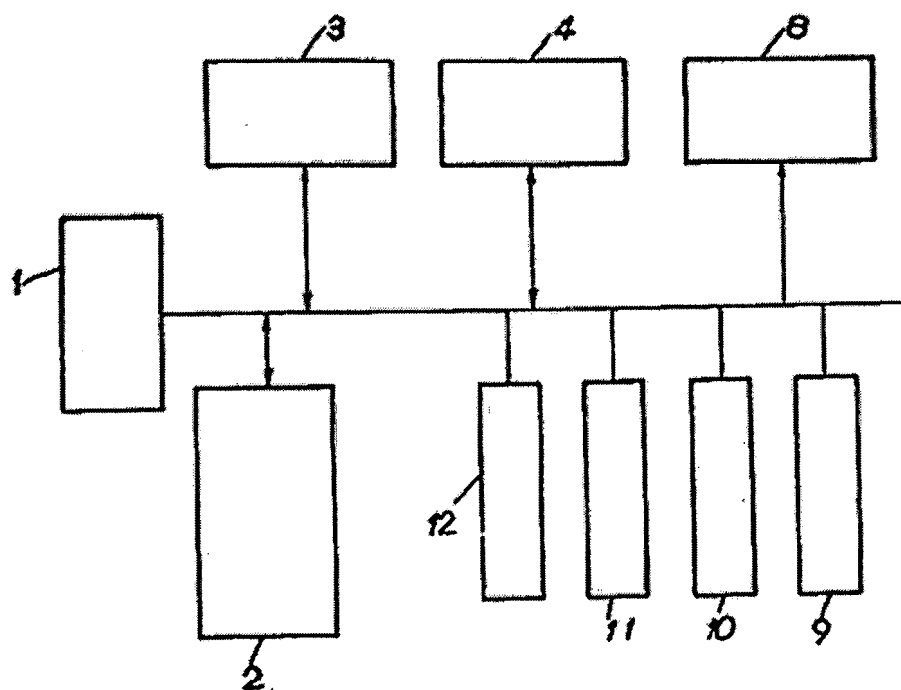
1 ... Control Unit or Control Means

2 ... Vending Control Unit

3 ... Memory Unit

4 ... Ticket Discharge Unit

5 ... Actual Account Memory

8 ... Display Unit

9 ... Account Detail Display Key

10 ... Account Data Change Key

11 ... Equal Key

12 ... Numerical Value Input Unit or Numerical Value Input Means

Applicant: Glory Co. Ltd

Agent: Ura KABASAWA, Patent Attorney (and 3 others)

FIG 2

	Account No.	Menu	Price
5	1	Curry	500
	2	Udon	450
	3	Zaru Soba	450
	4	Cold Soba	350
	...	...	
	30	Set Meal A	900
6	41	Donburi	650
	42	Milkshake	450
	43	Reimen	750
	...	...	
	50	Fried Udon	700

5 ... Actual Account Memory

6 ... Virtual Account Memory

FIG 3

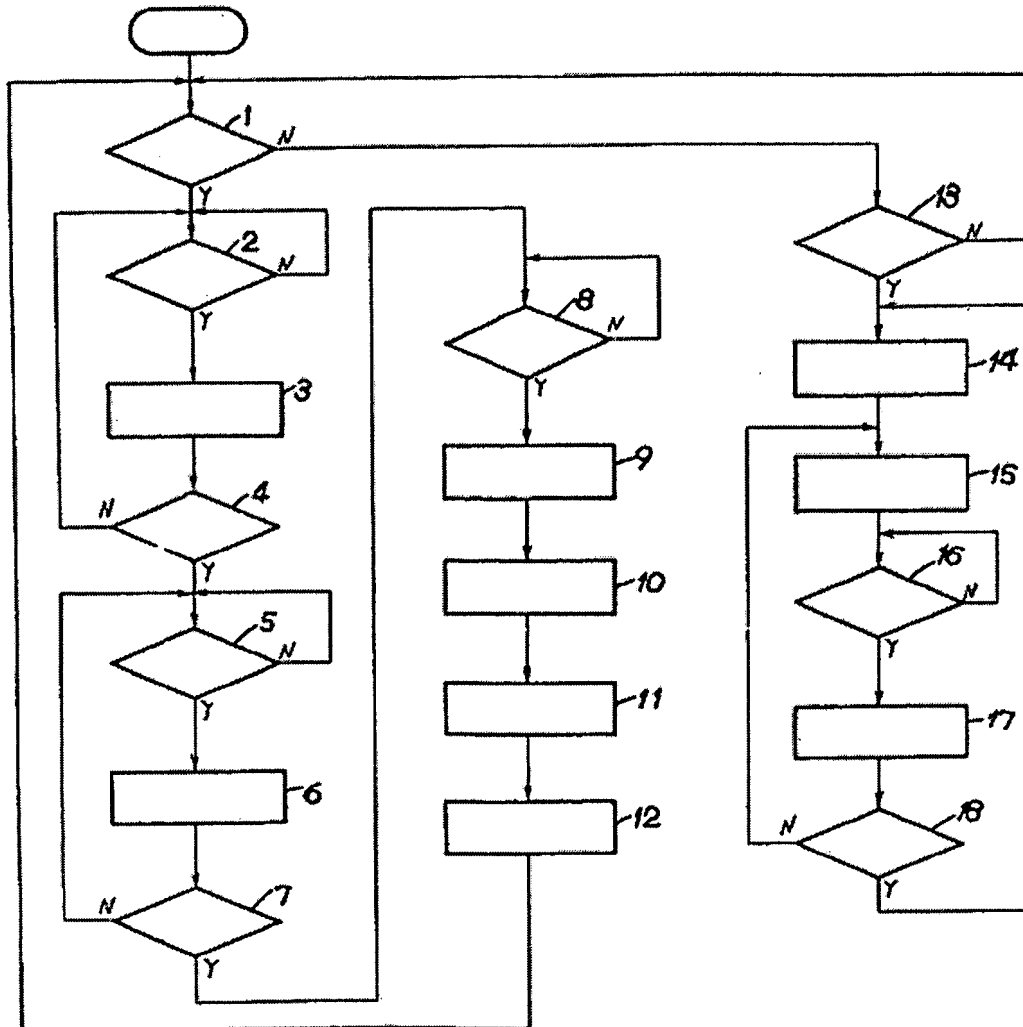|	BUF		
7			
	A		
	B		

7 ... Exchange Account Memory

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Agent: Ura KABASAWA, Patent Attorney (and 3 others)

FIG 4

Control

1 ... Account Change Indicated?

2 ... Account Number Inputted?

3 ... Store in Memory A

4 ... Virtual Account?

5 ... Account Number Inputted?

6 ... Store in Memory B

7 ... Actual Account?

8 ... Equal Key ON?

9 ... Shift Indicated Actual Account Data to BUF

10 ... Shift Indicated Virtual Account Data to Indicated Actual Account

11 ... Shift BUF Data to Virtual Account

12 ... Print Shifted Indicated Actual Account Data

13 ... Account Displayed?

14 ... DISP = 1

15 ... Display Account Data

16 ... Equal Key ON?

17 ... DISP = DISP + 1

18 ... DISP = 51?

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